

UNITED STATES DISTRICT COURT
DISTRICT OF NEVADA

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HALO ELECTRONICS, INC.,

Plaintiff,

v.

PULSE ELECTRONICS, INC. and
PULSE ELECTRONICS
CORPORATION,

Defendants.

2:07-cv-00331-PMP-PAL

ORDER

Before the Court is Defendants Pulse Electronics, Inc. and Pulse Electronics Corporation's (collectively "Pulse") Motion for Entry of Findings of Fact and Conclusions of Law Under Rule 52 (Doc. #514), filed January 11, 2013. Plaintiff Halo Electronics, Inc. ("Halo") filed a Response (Doc. #517) on January 25, 2013. Pulse filed a Reply (Doc. #518) on February 1, 2013.

This patent infringement case was tried before a jury beginning on November 6, 2012. (Mins. of Proceedings (Doc. #427).) On November 26, 2012, the jury returned a verdict finding all, except one, of Pulse's accused products directly infringed the asserted patent claims, and that Pulse induced others to infringe the asserted patent claims with respect to all, except one, of Pulse's accused products. (Jury Verdict (Doc. #482) at 1-8.) The jury also found Halo had proven it was highly probable Pulse's infringement was willful. (*Id.* at 9.) The jury further found Pulse had not proven the asserted patent claims were invalid for obviousness or for failing to name all inventors. (*Id.* at 9-10.) Finally, the jury determined the date Halo began marking its products, a reasonable royalty rate, and an adequate amount of damages to compensate Halo for Pulse's infringement. (*Id.* at 11.)

1 The issues remaining for the Court are the legal determinations of Pulse's obviousness
2 defense and the objective element of Halo's willfulness claim. Additionally, the Court must
3 rule on the equitable determinations of Pulse's inequitable conduct, equitable estoppel, and
4 laches defenses. Based upon the testimony of the witnesses at trial and other evidence in
5 the record, the Court hereby enters the following Findings of Fact and Conclusions of Law
6 on these remaining legal and equitable issues. The Court first addresses Pulse's
7 obviousness, inequitable conduct, equitable estoppel, and laches defenses, and then
8 considers Halo's willfulness claim.

9 **I. OBVIOUSNESS**

10 Pulse argues it has proven by clear and convincing evidence that the asserted patent
11 claims are obvious. According to Pulse, its infringement expert demonstrated that each
12 element of the asserted patent claims was well known in the prior art before Halo filed its
13 patent application and that the elements were combined in a predictable way. Pulse further
14 argues that the secondary considerations of obviousness weigh in favor of obviousness.
15 Pulse contends the commercial success of the patented design was due to litigation-driven
16 licenses and not the products themselves. Pulse further argues there was no long-felt need
17 for or initial skepticism of Halo's design because Pulse had been selling the open header
18 design that solved the problem of cracking under high pressure for years before Halo filed
19 its patent applications. Pulse also argues there was no unexpected result because it was
20 obvious to combine the prior art to create Halo's design. Pulse additionally asserts that the
21 evidence of copying or acceptance by others is due only to Halo's litigation-driven licenses.
22 Finally, Pulse contends Halo produced no evidence Halo was proceeding contrary to
23 conventional wisdom.

24 Halo responds that because Pulse failed to file a pre-verdict Motion for Judgment as a
25 Matter of Law on obviousness, Pulse waived its right to challenge the factual basis
26 underlying the jury's implicit findings on obviousness. Halo further argues that Pulse has

1 not proven the asserted claims were obvious. Specifically, Halo argues that after resolving
2 all factual disputes on obviousness in Halo's favor, the result is the conclusion that the
3 asserted patent claims are not obvious.

4 The ultimate question of obviousness is a question of law based on the jury's factual
5 findings. i4i Ltd. P'ship v. Microsoft Corp., 598 F.3d 831, 845 (Fed. Cir. 2010), aff'd 131
6 S. Ct. 2238 (2011). "The extent to which [the Court] may review the jury's implicit factual
7 findings depends on whether a pre-verdict [Judgment as a Matter of Law] was filed on
8 obviousness." Id. When a party fails to file a pre-verdict Motion for Judgment as a Matter
9 of Law under Rule 50(a) on obviousness, that party waives its right to challenge the jury's
10 factual findings on obviousness for substantial evidence. Id. When the jury makes no
11 explicit factual findings and returns a verdict finding only that the claims were not obvious,
12 courts presume the jury resolved the underlying factual disputes in the patentee's favor
13 when analyzing the ultimate legal question of obviousness. Id. at 845-46; see also Jurgens
14 v. McKasy, 927 F.2d 1552, 1558 (Fed. Cir. 1991) ("In the absence of a proper motion for
15 directed verdict during the trial below, the sole question for review is whether the factual
16 story told to the jury by the verdict winner (we must assume that the jury correctly believed
17 it) supports the legal conclusion of nonobviousness.").

18 A patent is invalid for obviousness "if the differences between the claimed invention
19 and the prior art are such that the claimed invention as a whole would have been obvious
20 before the effective filing date of the claimed invention to a person having ordinary skill in
21 the art to which the claimed invention pertains." 35 U.S.C. § 103. Thus, when a patent
22 "simply arranges old elements with each performing the same function it had been known
23 to perform and yields no more than one would expect from such an arrangement, the
24 combination is obvious." KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 417 (2007)
25 (quotation omitted). Underlying factual considerations in an obviousness analysis include
26 the scope and content of the prior art; teaching, suggestion, or motivation to combine

1 elements from different prior art references; and any relevant secondary considerations.
2 Allergan, Inc. v. Sandoz Inc., --- F.3d ----, 2013 WL 1810852, at *4 (Fed. Cir. May 1,
3 2013). However, although evidence of teaching, suggestion, or motivation to combine
4 elements from different prior art references “is useful in an obviousness analysis, the overall
5 inquiry must be expansive and flexible.” Kinetic Concepts, Inc. v. Smith & Nephew, Inc.,
6 688 F.3d 1342, 1360 (Fed. Cir. 2012). Secondary considerations of obviousness include
7 commercial success, a long-felt but unsolved need, failure of others to solve the problem,
8 initial skepticism, copying and praise by others, and licensing. Allergan, 2013 WL 1810852,
9 at *4; Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc., 699 F.3d
10 1340, 1350-54 (Fed. Cir. 2012). The defendant bears the burden of proving by clear and
11 convincing evidence that the patent is obvious. Kinetic Concepts, 688 F.3d at 1360.

12 Here, the Court makes no factual findings on obviousness, which was the province of
13 the jury, and considers only whether the jury’s factual findings on obviousness show by
14 clear and convincing evidence that the asserted patent claims were obvious. Pulse did not
15 file a pre-verdict Motion for Judgment as a Matter of Law on obviousness, and thus waived
16 the right to challenge the jury’s factual findings on obviousness for substantial evidence.
17 The jury found Pulse had not proven the patent claims were obvious, but returned no
18 specific factual findings. (Jury Verdict (Doc. #482) at 9.) The Court therefore presumes
19 the jury resolved all factual disputes in Halo’s favor in considering whether the asserted
20 patent claims were obvious.

21 **A. The Prior Art**

22 As to the scope of the prior art and its similarity to the asserted patent claims, Pulse
23 introduced four prior art references at trial, Western Electric, Rockwell, Valor, and Akachi,
24 which Pulse’s infringement expert testified disclosed all of the asserted patent claim
25 elements. Halo’s infringement expert disagreed with Pulse’s infringement expert’s opinion
26 regarding whether two of the prior art parts contained certain of the asserted patent claims’

1 elements. (Jury Trial Tr. - Day 9 (Doc. #468) at 246-50; Jury Trial Tr. - Day 10 (Doc.
2 #479) at 116-23.) However, Halo's infringement expert ultimately agreed with Pulse's
3 infringement expert that each of the elements present in the asserted patent claims also were
4 present in the prior art, except the standoff element in claim 7 of the '985 patent and
5 claim 48 of the '785 patent. (Halo's Opp'n to Pulse's Mot. For Entry of Findings of Fact &
6 Conclusions of Law under Rule 52 (Doc. #517), Ex. A at 4-12.) Thus, even with the
7 presumption that all factual disputes are resolved in favor of Halo, Pulse demonstrated that
8 the prior art contained the elements for all but two of the asserted patent claims.

9 However, the fact that each of the elements of the asserted patent claims was
10 independently present in the prior art does not in itself prove obviousness because the
11 combination of elements within the prior art may not be obvious. See KSR Int'l, 550 U.S.
12 at 418 ("A patent composed of several elements is not proved obvious merely by
13 demonstrating that each of its elements was, independently, known in the prior art").
14 Further, the prior art relied on by Pulse at trial was similar to the content of the prior art
15 before the United States Patent and Trademark Office ("PTO") during the Halo patents'
16 original prosecution and reexamination. (Jury Trial Tr. - Day 9 (Doc. #468) at 229-35.)
17 This weighs in favor of nonobviousness. See Jurgens, 927 F.2d at 1560 (finding the prior
18 art the PTO considered was similar to the prior art the PTO did not consider when the
19 parties disputed this fact, because the presumption of resolving all factual disputes in favor
20 of the patentee applied).

21 Thus, that all the elements of the asserted claims, save two, were present in the prior
22 art weighs in favor of obviousness. However, the fact that the PTO considered similar prior
23 art weighs in favor of nonobviousness.

24 **B. Motivation to Combine and Teaching Away**

25 For motivation to combine, Pulse's infringement expert testified that it would have
26 been obvious and logical to combine the elements of the four prior art references Pulse

1 presented at trial to create the asserted patent claims' elements, specifically referencing the
2 Western Electric and Akachi parts. (Jury Trial Tr. - Day 7 (Doc. #466) at 108.) Halo's
3 infringement expert did not specifically address whether there would have been a
4 motivation to combine the Akachi and Valor parts together or with the Western Electric or
5 Rockwell parts. However, Halo's infringement expert testified generally that he disagreed
6 with Pulse's infringement expert's conclusion that it would have been obvious to combine
7 the prior art to create the asserted patent claims, and that Pulse's infringement expert was
8 going through "a lot of contortions to combine things." (Jury Trial Tr. - Day 9 (Doc. #468)
9 at 251-52.) Halo's infringement expert also testified that there was nothing obvious he
10 would have pulled from the Western Electric and Rockwell parts in defining the accused
11 parts. (Id. at 226-28.)

12 Additionally, a Pulse engineer testified that he did not see why the Western Electric
13 and Rockwell parts were relevant to Pulse's accused parts.¹ (Jury Trial Tr. - day 8 (Doc.
14 #467) at 256.) Based on this testimony by Pulse's engineer, Halo's infringement expert
15 testified that if the Western Electric and Rockwell parts were "not relevant to someone who
16 was on the ground at the time," the parts "can't form the basis of an obviousness
17 combination" for that person. (Jury Trial Tr. - Day 9 (Doc. #468) at 228-29.) The jury
18 found the accused products, except one, met the elements of the asserted patent claims.
19 (Jury Verdict (Doc. #482) at 1-5.) Therefore, if the Western Electric and Rockwell parts
20 were not relevant to the accused products, they were not relevant to the asserted patent
21 claims that those products infringed, and there would be no motive to combine those parts
22 to create the asserted patent claims. Halo presented evidence that there was no motivation
23 to combine the prior art to create the asserted patent claims, so the Court presumes the jury
24

25 ¹ Pulse argues that this witness was not giving opinion testimony regarding obviousness.
26 However, the Court must resolve all factual disputes in favor of Halo, and this evidence supports
Halo's contention that the prior art does not show the asserted patent claims are obvious.

1 resolved this fact in favor of Halo. See i4i Ltd. P'ship, 598 F.3d at 846 (finding the
2 presumption that the jury resolved factual disputes in favor of the patentee applies to
3 disputes about the existence of motivation to modify prior art references). Therefore, the
4 evidence on motivation to combine the prior art to create the patented design weighs in
5 favor of nonobviousness.

6 As to whether the prior art taught away from the asserted patent claims, Halo's
7 infringement expert testified that "the work that other people were doing, the solutions that
8 they were pursuing" was "that they were working on other things." (Jury Trial Tr. - Day 9
9 (Doc. #468) at 258.) Halo's infringement expert also testified that Pulse was "working on
10 different things as opposed to the solution that ultimately was determined." (Id. at 258-59.)
11 Therefore, presuming the jury resolved this factual issue in favor of Halo, the prior art
12 taught away from the Halo patents. See Spectralytics, Inc. v. Cordis Corp., 649 F.3d 1336,
13 1343 (Fed. Cir. 2011) ("Whether the prior art teaches away from the claimed invention is a
14 question of fact."). Consequently, teaching away also weighs in favor of nonobviousness.

15 **C. Objective Factors of Obviousness**

16 **1. Commercial Success**

17 Pulse argues that the commercial success of its accused products was not due to the
18 patented design. Pulse's Director of Marketing testified there were cases where customers
19 preferred open header or transfer molded, but the majority of customers had no preference
20 and made a decision based on cost. (Jury Trial Tr. - Day 7 (Doc. #466) at 318-20.) Pulse
21 presented evidence that the costs for open header parts and transfer molded parts were
22 similar, but sometimes one type could be more expensive than the other. (Id. at 326-27.)

23 However, Halo presented evidence of the accused products' commercial success, and
24 the accused products embodied Halo's invention. (Jury Trial Tr. - Day 8 (Doc. #467), at
25 186 (Pulse did "\$250 million worth of sales 10 over ten years" of the accused products);
26 Jury Trial Tr. - Day 9, at 256 (once Pulse "began to ship accused parts, they shipped

1 \$257,000,000 worth of accused parts”).) Therefore, Halo triggered the presumption that the
2 commercial success of the accused products is due to Halo’s patented invention. See J.T.
3 Eaton & Co. v. Atl. Paste & Glue Co., 106 F.3d 1563, 1571 (Fed. Cir. 1997) (“When a
4 patentee can demonstrate commercial success, usually shown by significant sales in a
5 relevant market, and that the successful product is the invention disclosed and claimed in
6 the patent, it is presumed that the commercial success is due to the patented invention.”);
7 Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1130 (Fed. Cir.
8 2000) (“[I]f the marketed product embodies the claimed features, and is coextensive with
9 them, then a nexus is presumed and the burden shifts to the party asserting obviousness”).
10 The factual dispute over the reason for the accused products’ commercial success must be
11 resolved in favor of Halo, and thus the commercial success of the accused products weighs
12 in favor of nonobviousness.

13 **2. Solving Long-Standing Problem**

14 Pulse presented evidence that Halo’s invention did not solve the long-standing
15 problem of transfer molded parts cracking at high temperatures and that others in the
16 industry had failed to solve this problem. Specifically, Pulse presented evidence that in
17 1986 Pulse was selling an open bottom surface-mount transformer that could withstand a
18 250 degree Celsius heating process without cracking. (Jury Trial Tr. - Day 6 (Doc. #465) at
19 227-28.) However, Halo’s infringement expert testified that people in the industry knew
20 about the cracking problem for years, at least as far back as the 1980’s. (Jury Trial Tr. -
21 Day 9 (Doc. #468), at 256-57.) Halo’s infringement expert also testified that “all of the
22 solutions, except the one proposed by Halo, failed.” (Id. at 257.) The Court must presume
23 the jury resolved this factual dispute in Halo’s favor. Therefore, the factors of a long-felt
24 but unmet need and the failure of others to solve the problem weigh in favor of
25 nonobviousness.

26 ///

3. Initial Skepticism

Pulse argues that the one instance of skepticism of Halo's invention in the industry is not enough to sway this factor in favor of Halo. Halo's Vice President and Chief Operating Officer testified that when Halo sent Hewlett Packard samples of Halo's patented surface mount transformers, Hewlett Packard was skeptical that the design would work. (Jury Trial Tr. - Day 2 (Doc. #435) at 6-7, 62.) Halo's infringement expert testified that Hewlett Packard's skepticism demonstrated initial skepticism for obviousness purposes. (Jury Trial Tr. - Day 9 (Doc. #468) at 257-58.) Pulse is challenging the sufficiency of the evidence supporting skepticism, an argument which Pulse waived by failing to file a Rule 50(a) Motion on obviousness. Therefore, the skepticism factor weighs in favor of nonobviousness.

4. Copying by Others

Pulse argues that the factor of copying by others weighs in favor of obviousness. Pulse argues that it did not copy the patented design because although it began making some open header surface-mount products after Halo patented its design, it continued to sell non-accused products, such as transfer molded surface-mount transformers. However, that Pulse did not fully move its product line from transfer molded parts to open-header parts does not change the fact that Pulse switched part of its product line to Halo's patented design after Halo patented its design, which supports an inference of copying. (Jury Trial Tr. - Day 5 (Doc. #464) at 147-48, 244.) And in any event, Halo presented evidence that Halo's patented design was copied by others in the industry.² Halo's Vice President of Global Sales, testified that the open construction design of Halo's patented invention was

² Halo also argues it presented evidence the patented invention was praised, but gives no record support showing praise. Evidence that the invention was copied could support an inference that the patented design was praised. However, notwithstanding this inference, even if the Court weighed this one factor in favor of obviousness, Pulse still has not shown obviousness by clear and convincing evidence.

1 unique at first, but has since become “more common place” because some of Halo’s
2 competitors now use the open construction design. (Jury Trial Tr. - Day 4 (Doc. #442) at
3 292.) Thus, presuming the jury resolved this factual dispute in Halo’s favor, this factor
4 weighs in favor of nonobviousness.

5. Licensing of the Patented Invention

6 Pulse argues that this factor weighs in favor of nonobviousness because Halo’s
7 licenses to four of Halo and Pulse’s competitors for use of Halo’s patented design were
8 primarily the result of litigation. Pulse argues this is demonstrated by the testimony that
9 one of these competitors entered into the licensing agreement to settle the lawsuit Halo had
10 brought against the competitor. (Jury Trial Tr. - Day 8 (Doc. #467) at 160-61.) However,
11 Halo’s damages expert testified that these licenses provided evidence of the value of the
12 patents. (Jury Trial Tr. - Day 5 (Doc. #464) at 92-94.) Resolving this factual dispute in
13 favor of Halo, the licenses provide evidence that Halo’s competitors valued the claimed
14 invention enough to pay for its use. See Transocean, 699 F.3d at 1353 (finding that, when
15 confronted with conflicting evidence about the motivation behind licensing agreements, “a
16 reasonable jury could have found that the licenses reflect the value of the claimed invention
17 and are not solely attributable to litigation”). The licensing of the patented invention thus
18 weighs in favor of obviousness.

19 In summary, presuming the jury resolved all factual disputes in Halo’s favor, Pulse has
20 not met its burden to show obviousness by clear and convincing evidence. It is undisputed
21 that between the four prior art references presented by Pulse at trial, all of the claimed
22 elements, except the standoff element in claim 7 of the ‘985 patent and claim 48 of the ‘785
23 patent, were present in the prior art. However, the rest of the factors weigh in favor of
24 Halo: the PTO considered prior art which contained the same concepts as in the prior art
25 Pulse presented at trial, there was no motivation to combine the specific elements to make
26 the asserted patent claims, the prior art taught away from Halo’s design. Further, Halo’s

1 patented design was commercially successful, solved a long-standing problem, was initially
2 received with skepticism, was copied by others, and was licensed to competitors.
3 Therefore, the Court finds that based upon the jury's presumed factual findings the asserted
4 patent claims were not obvious.

5 Even without the presumption that all factual disputes are resolved in Halo's favor,
6 Pulse has not proven obviousness by clear and convincing evidence. While Pulse presented
7 evidence of obviousness in the form of its infringement expert's opinion testimony and lay
8 witness testimony, Halo presented countervailing evidence of nonobviousness. Thus,
9 considering all of the evidence on obviousness from both parties, Pulse has not proven
10 obviousness by clear and convincing evidence. The Court therefore finds the asserted
11 patent claims are not invalid for obviousness.

12 **II. INEQUITABLE CONDUCT**

13 Pulse argues that Halo committed inequitable conduct before the PTO by not naming
14 T. K. Luk ("Luk"), a former employee of a manufacturing company that worked with Halo,
15 as an inventor of the Halo patented designs. Pulse asserts Luk was an inventor based on his
16 testimony stating he invented the patented design, as well as a fax which shows Luk was
17 involved in the conception of the invention. Pulse argues that a failure to name all
18 inventors renders a patent invalid, and therefore this was material information that should
19 have been presented to the PTO. Pulse further contends Halo's specific intent to deceive
20 the PTO can be inferred from the fact that the named inventors knew of Luk's contributions
21 to the inventions and failed to name him as an inventor. Pulse also argues that specific
22 intent to exclude Luk may be inferred from the fact that Luk left the company that worked
23 with Halo and joined a competing company right before the first Halo patent was filed, and
24 therefore it would have been more difficult to get a patent application filed if Luk were
25 included in the process.

26 ///

1 Halo responds that information relating to Luk was not material because the evidence
2 shows Luk was not an inventor. Halo argues that this defense comes down to a credibility
3 dispute between Luk and three of the named inventors who testified Luk was not involved
4 in the conception of the invention. Halo further argues that Luk's testimony is implausible
5 and undermined when compared to the named inventors' testimony. According to Halo
6 Luk was biased against Halo because he created fake documents altering the dates of certain
7 engineering changes to support his new employer's summary judgment motion in another
8 lawsuit with Halo. Halo also contends that the documents Pulse offers to corroborate Luk's
9 testimony are insufficient because one document shows only the latest date the design was
10 conceived, and the other is an e-mail created by Luk after the named inventors filed the
11 patent application. Halo finally argues that Pulse cannot prove specific intent to deceive the
12 PTO because the only proper inference that can be drawn from the facts is that the named
13 inventors did not mention Luk because he was not an inventor.

14 "Patent applicants have a duty to prosecute patent applications in the Patent Office
15 with candor, good faith, and honesty." Symantec Corp. v. Computer Assocs. Int'l, Inc., 522
16 F.3d 1279, 1296 (Fed. Cir. 2008) (quotation omitted). "A breach of this duty constitutes
17 inequitable conduct and renders the entire patent unenforceable." Id. To prevail on a claim
18 of inequitable conduct, the accused infringer must prove by clear and convincing evidence
19 that the applicant (1) knew the information was material and (2) made a deliberate decision
20 to withhold the information to deceive the PTO. Therasense, Inc. v. Becton, Dickinson &
21 Co., 649 F.3d 1276, 1290 (Fed. Cir. 2011) ("To prevail on a claim of inequitable conduct,
22 the accused infringer must prove that the patentee acted with the specific intent to deceive
23 the PTO.").

24 As to the first element, generally, "the materiality required to establish inequitable
25 conduct is but-for materiality." Id. at 1291. However, there is an exception for "affirmative
26 acts of egregious misconduct, such as the filing of an unmistakably false affidavit," which

1 are always considered material. Id. at 1292. For example, the identity and disclosure of all
2 inventors is a material fact that would affect whether the PTO would allow the claim. See
3 PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc., 225 F.3d 1315, 1321 (Fed. Cir.
4 2000) (“As a critical requirement for obtaining a patent, inventorship is material.”); 35
5 U.S.C. § 115 (“An application for patent . . . shall include, or be amended to include, the
6 name of the inventor for any invention claimed in the application.”). A party asserting prior
7 or co-inventorship must proffer evidence corroborating the testimony of the prior or co-
8 inventor. Singh v. Brake, 317 F.3d 1334, 1340-41 (Fed. Cir. 2003). “[W]hether a putative
9 inventor’s testimony has been sufficiently corroborated is determined by a rule of reason
10 analysis, in which an evaluation of all pertinent evidence must be made so that a sound
11 determination of the credibility of the inventor’s story may be reached.” Id. at 1341.
12 Corroborating evidence may take many forms, such as “records made contemporaneously
13 with the inventive process,” or “circumstantial evidence of an independent nature.”
14 Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n, 383 F.3d 1352, 1382 (Fed. Cir. 2004).

15 For the second element of inequitable conduct, “to meet the clear and convincing
16 evidence standard, the specific intent to deceive must be the single most reasonable
17 inference able to be drawn from the evidence.” Therasense, 649 F.3d at 1290 (quotation
18 omitted). “Indeed, the evidence must be sufficient to require a finding of deceitful intent in
19 the light of all the circumstances.” Id. at 1290 (quotation and emphasis omitted). Thus,
20 “when there are multiple reasonable inferences that may be drawn, intent to deceive cannot
21 be found.” Id. at 1290-91. Even if the accused infringer proves the elements of inequitable
22 conduct by clear and convincing evidence, “[t]he ultimate determination of inequitable
23 conduct is committed to the sound discretion of the trial court.” Dippin’ Dots, Inc. v.
24 Mosey, 476 F.3d 1337, 1345 (Fed. Cir. 2007).

25 Here, Pulse argues that a preponderance of the evidence standard should apply, stating
26 that the issue is “whether the PTO would have rejected the claims based on the

1 nondisclosure of Mr. Luk, which is addressed under the preponderance of the evidence
2 standard.” (Pulse’s Reply in Support of Def.’s Mot. For Entry of Findings of Fact &
3 Conclusions of Law (Doc. #518) at 12-13 (emphasis omitted).) The preponderance of the
4 evidence standard applies in the determination of but-for materiality for failure to disclose
5 prior art to the PTO. Therasense, 649 F.3d at 1291-92 (stating courts must apply the
6 preponderance of the evidence standard when determining “whether the PTO would have
7 allowed the claim if it had been aware of the undisclosed reference”); see also Manual of
8 Patent Examining Procedure § 706 (“an examiner should reject a claim if, in view of the
9 prior art and evidence of record, it is more likely than not that the claim is unpatentable”).
10 As explained previously, however, inventorship is material, and therefore this
11 preponderance of the evidence standard does not apply because a patent would not be
12 issued if all of the inventors were not named on the application. Thus, the issue here is
13 whether Pulse has shown Luk was an inventor that needed to be disclosed, which Pulse
14 must prove by clear and convincing evidence. Even assuming Pulse needs to show this by
15 only a preponderance of the evidence, Pulse has not met its burden to show Luk was an
16 inventor that should have been disclosed.

17 Luk testified that he was the inventor of the patented design. (Jury Trial Tr. - Day 8
18 (Doc. #467) at 99, 103-05, 114 (Luk testifying that “[s]ome or all of the inventions claimed
19 in the Halo patents were derived from work in which I was involved” and that he could not
20 believe he was not named on the patents because “this is my design”).) Luk testified that he
21 came up with the open header design to solve the cracking problem, he drew up the sketch
22 on a whiteboard in his engineering room, and he conveyed his idea to his engineers. (Id. at
23 102-03.)

24 However, Pulse failed to sufficiently corroborate Luk’s testimony. Pulse argues that a
25 fax between Luk and the named inventors contains the only evidence of conception of
26 Halo’s claimed invention and shows Luk was involved as an inventor. (Jury Trial Tr. - Day

1 2 (Doc. #435) at 50-57, 162-63, 169; Pl.'s Trial Ex. 123.) However, this fax does not
2 corroborate Luk's testimony because it merely indicates Luk and Halo's President engaged
3 in fax communications containing a drawing of the patented design. (Pl.'s Trial Ex. 123.)
4 Furthermore, three of the six named inventors who testified at the trial explained that the
5 drawing on the fax is what would have been sent to a tool manufacturer to make the mold
6 for the product, or a "tooling drawing." (Jury Trial Tr. - Day 2 (Doc. #435) at 50, 237; Jury
7 Trial Tr. - Day 4 (Doc. #442) at 207-08.) They further testified that Luk would have been
8 sent the tooling drawing because he was in charge of manufacturing parts and would have
9 needed the new design for manufacturing purposes, not because he was involved in the
10 design process. (Jury Trial Tr. - Day 2 (Doc. #435) at 52, 56, 240-41; Jury Trial Tr. - Day 4
11 (Doc. #442) at 207-09.) This testimony undermines Pulse's claims that Luk's name
12 appearing on the fax shows he was involved in the designing process, to the extent that the
13 fax provides any corroboration for Luk's assertion that he was an inventor.

14 Pulse also argues an e-mail sent by Luk in 1996 corroborates his testimony that he was
15 an inventor. (Def.'s Trial Ex. 540.) Luk sent the e-mail to his supervisor at the company he
16 went to work for after Halo. (Id.) In the e-mail, Luk expressed that he felt upset about
17 being informed that Halo had warned that it would sue Luk's new employer if they
18 continued to use Halo's patented design because Luk was the "only one to design this SMD
19 case when I was in PBL/Halo and today I was told I could not use this design even with my
20 own tooling." (Id.) However, this e-mail also does not corroborate Luk's testimony that he
21 was an inventor because it was Luk's own statement made after the invention was
22 completed in reaction to a threat of a lawsuit. See Singh, 317 F.3d at 1340-41 ("Evidence
23 of the inventive facts must not rest alone on the testimony of the inventor himself.").

24 Furthermore, three of the named inventors testified at trial that Luk was not an
25 inventor of Halo's patented design and did not contribute at all to the ideas that became the
26 Halo patents. (Jury Trial Tr. - Day 2 (Doc. #435) at 57, 193-94, 240-41; Jury Trial Tr. -

1 Day 4 (Doc. #442) at 209.) These three named inventors also testified that the conception
2 of the invention occurred during multiple “brainstorming sessions” that occurred over the
3 course of several months, which included only the six inventors named on the patents.
4 (Jury Trial Tr. - Day 2 (Doc. #435) at 35-39, 221-30; Jury Trial Tr. - Day 4 (Doc. #442) at
5 203-07.) Each of the three named inventors who testified told consistent stories about the
6 conception process and who was involved.

7 Halo also presented an e-mail from Luk, for the limited purpose of showing Luk’s bias
8 against Halo, which stated Luk would ask a co-worker to “make some fake documents” in
9 response to his current employer’s request for documents relating to a lawsuit between his
10 current employer and Halo. (Jury Trial Tr. - Day 8 (Doc. #467) at 49, 152; Pl.’s Trial Exs.
11 413, 414). Thus, based on the lack of evidence corroborating Luk’s testimony, as well as
12 the evidence of Luk’s bias against Halo, Pulse has not proven, by clear and convincing
13 evidence or a preponderance of the evidence, that Luk was an inventor. Therefore, the
14 named inventor’s failure to name Luk as an inventor was not material.

15 Because Pulse has not met its burden to show failing to name Luk as an inventor was
16 material, Pulse also has failed to meet its burden to show Halo specifically intended to
17 deceive the PTO by not including Luk as an inventor. The Court therefore finds Pulse has
18 failed to prove Halo committed inequitable conduct in not naming Luk as an inventor.

19 **III. EQUITABLE ESTOPPEL**

20 Pulse argues that Halo should be estopped from enforcing its patents against Pulse
21 because its conduct misled Pulse to reasonably believe Halo did not intend to enforce its
22 patents against Pulse, resulting in prejudice to Pulse. Pulse argues that Halo’s President
23 testified he believed Pulse infringed at the time Halo sent Pulse letters in 2002 about Pulse’s
24 accused products and Halo’s patents. However, the letters contained no allegations of
25 infringement, which Pulse argues misled it into believing Halo did not intend to assert a
26 claim of infringement. Pulse also argues it relied on Halo’s misleading conduct because

1 after receiving the letter and before Halo brought suit, Pulse developed, marketed, and sold
2 millions of dollars' worth of accused products. Pulse also asserts it would have brought a
3 declaratory judgment action against Halo if it knew Halo was going to assert an
4 infringement suit. Pulse additionally argues it has suffered evidentiary prejudice because of
5 the death of a key witness, as well as economic prejudice because Halo deliberately delayed
6 bringing suit to increase its damages.

7 Halo responds that Pulse has not proven Halo misled Pulse to believe Halo did not
8 intend to enforce its patents because the 2002 letters would lead a reasonable person to
9 believe Halo was enforcing its patent rights through attempted licensing. Halo argues Pulse
10 fails to prove reliance because no Pulse witness testified that Pulse made the decision to
11 continue selling the accused products based on the letters. Halo further submits Pulse's
12 contention at trial that it continued to sell the accused products after it had done an internal
13 invalidity analysis is inconsistent with reliance on the letters and Halo's silence, and
14 therefore undermines any argument in favor of reliance. Halo also contends Pulse's
15 assertion that it would have instituted a declaratory judgment action if it would have known
16 Halo was going to allege infringement is speculation unsupported by the evidence. Finally,
17 Halo argues Pulse cannot prove either evidentiary prejudice because the death of the
18 witness occurred after Halo filed suit, or economic prejudice because Pulse did not stop
19 selling the accused products when this lawsuit was filed and Pulse opposes a permanent
20 injunction that would force Pulse to switch to an alternative design.

21 "Equitable estoppel is an equitable defense to infringement and may serve as an
22 absolute bar to a patentee's claim of infringement." Scholle Corp. v. Blackhawk Molding
23 Co., 133 F.3d 1469, 1471 (Fed. Cir. 1998). To support a defense of equitable estoppel in
24 the patent context, a defendant must show (1) "the patentee, through misleading conduct,
25 led the alleged infringer to reasonably believe that the patentee did not intend to enforce its
26 patent against the infringer," (2) the alleged infringer relied on the patentee's misleading

1 conduct, and (3) “due to its reliance, the alleged infringer would be materially prejudiced if
2 the patentee were permitted to proceed with its charge of infringement.” Aspex Eyewear
3 Inc. v. Clariti Eyewear, Inc., 605 F.3d 1305, 1310 (Fed. Cir. 2010). The preponderance of
4 the evidence standard applies, “absent special circumstances, such as fraud or intentional
5 misconduct.” A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1046 (Fed.
6 Cir. 1992).

7 As to the first element, “[m]isleading conduct may include specific statements, action,
8 inaction, or silence when there was an obligation to speak.” Aspex, 605 F.3d at 1310
9 (quotation marks omitted). However, the patentee’s inaction “must be combined with other
10 facts respecting the relationship or contacts between the parties to give rise to the necessary
11 inference that the claim against the defendant is abandoned.” Aukerman, 960 F.2d at 1042.
12 For example, a party threatening immediate or vigorous enforcement of its patent rights
13 then delaying its claim for an unreasonably long time may be estopped from pursuing its
14 claim. Meyers v. Asics Corp., 974 F.2d 1304, 1309 (Fed. Cir. 1992). But “a suggestion of
15 infringement coupled with an offer to license followed by silence” is probably insufficient
16 to establish misleading conduct for estoppel purposes. Id. at 1308. (quotation omitted).

17 Secondly, an alleged infringer ignoring or giving little weight to a patentee’s offer to
18 negotiate licenses may be evidence that the alleged infringer did not rely on the patentee’s
19 conduct. Id. at 1309. The accused infringer must show “it substantially relied on the
20 misleading conduct of the patentee in connection with taking some action.” Aukerman, 960
21 F.2d at 1042-43. Essentially, “the infringer must have had a relationship or communication
22 with the plaintiff which lulls the infringer into a sense of security in going ahead with [its
23 infringing conduct].” Id. at 1043.

24 As to the final element, prejudice can be evidentiary or economic. Id. Evidentiary
25 prejudice arises when key witnesses or documentary evidence is lost or witnesses’
26 memories lessen because of the plaintiff’s unreasonable delay. Meyers, 974 F.2d at 1308.

1 Economic prejudice “may be shown by a change of economic position flowing from actions
2 taken or not taken by the patentee.” Aspex, 605 F.3d at 1312. However, the alleged
3 infringer must prove that any increased expenditure is related to the actions taken by the
4 patentee, and not merely a business decision. Gasser Chair Co. v. Infanti Chair Mfg. Corp.,
5 60 F.3d 770, 774 (Fed. Cir. 1995).

6 Whether to apply equitable estoppel is committed to the sound discretion of the trial
7 court. Aukerman, 960 F.2d at 1041. When “deciding whether to bar the suit on estoppel
8 grounds, the court must consider all evidence relevant to the equities.” Aspex, 605 F.3d at
9 1310. “[E]quitable estoppel is not limited to a particular factual situation nor subject to
10 resolution by simple or hard and fast rules.” Aukerman, 960 F.2d at 1041.

11 Here, Pulse has not shown misleading conduct by Halo. The first letter Halo’s
12 attorneys sent to Pulse in 2002 informed Pulse that Halo had surface mount packaging
13 patents, stated “Halo is interested in licensing these patents, and would like to solicit your
14 company’s interest in entering into negotiations for the license of these patented
15 technologies,” and requested an answer from Pulse by the end of the month. (Pl.’s Trial Ex.
16 91.) The second letter, sent one month later, states that there “is reason to believe” Pulse is
17 manufacturing products that “may possess features similar to those embodied in [Halo’s
18 patents],” that Halo had not reached “any conclusive determinations” as to whether Pulse
19 was infringing, but rather was “devoting its energy to working out suitable arrangements
20 with companies that would benefit from licensing Halo’s patented technologies,” such as
21 Pulse. (Pl.’s Trial Ex. 92.) Neither of these letters threaten immediate or vigorous
22 enforcement of Halo’s patents, or even affirmatively allege infringement. Thus, Halo’s
23 silence after sending the second letter, at least until suit was brought, does not establish
24 misleading conduct by Halo that demonstrated to Pulse that Halo was abandoning a
25 potential claim of infringement. See Meyers, 974 F.2d at 1305-06, 1309 (finding a letter
26 that was an invitation to enter into a business relationship and did not threaten litigation or

1 communicate acquiescence to the infringement, combined with silence until the patentee
2 filed suit, was not misleading conduct).

3 Pulse's contention that Halo believed that Pulse infringed at the time Halo's attorney
4 sent the letters but did not say so in the letters does not show misleading conduct. Halo's
5 President testified that at the time Halo's attorney sent the 2002 letters he believed that
6 Pulse was infringing the Halo patents. (Jury Trial Tr. - Day 4 (Doc. #442) at 259.)
7 However, Pulse has presented no evidence that Pulse was aware of this fact prior to the
8 commencement of this litigation, and thus Pulse could not have been misled by Halo's
9 belief that Pulse did in fact infringe.

10 Additionally, Pulse's argument that the letters may show Halo had decided Pulse did
11 not infringe also does not show misleading conduct. Pulse's Chief Operating Officer
12 testified that the second letter may suggest Halo performed an infringement analysis and
13 determined that Pulse did not infringe. (Jury Trial Tr. - Day 6 (Doc. #465) at 48.)
14 However, the standard for misleading conduct in a case where there is communication and
15 then silence is not whether the conduct was ambiguous, but whether the conduct threatened
16 immediate or vigorous enforcement of an infringement claim followed by a long period of
17 silence that indicated the patentee would not be enforcing the claim. Meyers, 974 F.2d at
18 1309. Thus, based on the two letters, which contained no accusation of infringement,
19 followed by Halo's silence, it was not reasonable for Pulse to infer that Halo did not intend
20 to enforce its patents against Pulse. Pulse has not established that Halo's conduct misled
21 Pulse, and therefore Pulse cannot prove equitable estoppel. The Court finds Pulse has not
22 proven Halo should be equitably estopped.

23 **IV. LACHES**

24 Pulse argues that under the doctrine of laches the Court should bar relief for any
25 damages that occurred before this litigation commenced. Pulse argues that the evidence
26 demonstrates Halo delayed bringing suit for an unreasonable and inexcusable amount of

1 time after Halo knew or should have known of its claims against Pulse. Pulse argues that
2 Halo's purpose in delaying was to accrue a higher amount of damages. Pulse also argues it
3 suffered material economic and evidentiary prejudice as a result of that delay.

4 Halo responds that Halo's four and a half year delay was not unreasonable given the
5 circumstances. Particularly, Halo had sent letters to several potential infringers and was
6 taking steps to enforce its claims of infringement by filing suit against one company in
7 2003. Halo also argues that the terminal illness and death of Halo's President's wife
8 interrupted Halo's infringement suits, and once Halo resumed its enforcement actions it
9 took a while to find proper counsel and file suit against Pulse. Halo finally argues Pulse
10 suffered no prejudice for the same reasons as it did not suffer prejudice under equitable
11 estoppel.

12 "The application of the defense of laches is committed to the sound discretion of the
13 district court." Aukerman, 960 F.2d at 1032. To prove laches, a defendant must show that
14 the plaintiff delayed filing suit for an "unreasonable and inexcusable length of time after the
15 plaintiff knew or reasonably should have known of its claim against the defendant; and . . .
16 the delay resulted in material prejudice or injury to the defendant." Wanlass v. Gen. Elec.
17 Co., 148 F.3d 1334, 1337 (Fed. Cir. 1998) (quotation omitted).

18 "The length of time which may be deemed unreasonable has no fixed boundaries but
19 rather depends on the circumstances." Aukerman, 960 F.2d at 1032. Generally, "[t]he
20 Circuit has pronounced a three or four-year delay unreasonable only when that delay was
21 accompanied by extraneous improper tactics or misleading conduct by the plaintiff." IXYS
22 Corp. v. Advanced Power Tech., Inc., 321 F. Supp. 2d 1156, 1163 (N.D. Cal. 2004) (citing
23 MCV, Inc. v. King-Seeley Thermos Co., 879 F.2d 1568, 1572 (Fed. Cir. 1989); Rosemount,
24 Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1550 (Fed. Cir. 1984)). For example, a
25 plaintiff co-inventor telling a patentee that he had no interest in possessing rights in the
26 patent, then later bringing suit to be named on the patent was misleading conduct. MCV,

1 879 F.2d at 1572. A delay of more than six years raises a presumption that the delay is
2 unreasonable. Wanlass, 148 F.3d at 1337. Material prejudice may be established by
3 showing economic or evidentiary prejudice. Id.

4 Pulse does not argue the six year presumption applies, and the Court finds no
5 evidence to show Halo knew or should have known of Pulse's infringement more than six
6 years before Halo filed suit against Pulse. Id. ("The period of delay begins at the time the
7 patentee has actual or constructive knowledge of the defendant's potentially infringing
8 activities.") Thus, the burden rests on Pulse to prove Halo's delay was unreasonable and
9 inexcusable and that Pulse suffered material prejudice as a result of that delay.

10 Pulse has not shown that Halo delayed filing suit for an unreasonable and inexcusable
11 length of time. Halo accused multiple companies of infringement, and addressed each
12 infringer one by one. Furthermore, Halo's President's wife fell terminally ill soon after
13 Halo began its patent enforcement activities in 2003, and passed away in 2005, which
14 further shows Halo's delay was reasonable given that Halo is a small company. (Jury Trial
15 Tr. - Day 4 (Doc. #442) at 264-65.) Finally, Halo's President credibly testified that after his
16 wife passed away and he resumed running Halo, it took a couple of years to find a lawyer
17 who would take the case on contingency, which further explains Halo's delay in bringing
18 suit. (Id. at 263.)

19 Pulse argues that Halo delayed suit because it knew it could not get damages, as
20 demonstrated by an e-mail sent from Halo's President to Halo's Vice President and
21 engineer. This e-mail, referred to by Pulse as Defendant's Trial Exhibit 588, was not
22 admitted at trial and is not included in the Motions now before the Court. However, even if
23 the e-mail were properly before the Court, it does not demonstrate Halo's delay was
24 unreasonable and inexcusable, or for an improper purpose. While this e-mail may show
25 Halo may have had an incentive to wait and file suit after damages accrued, the weight of
26 the evidence shows that Halo had legitimate and reasonable justifications for not bringing

1 suit earlier. The Court therefore finds Pulse has not proven that laches should bar Halo
2 relief for damages that occurred before Halo filed suit.

3 **V. WILLFULNESS**

4 Halo argues it has shown by clear and convincing evidence that Pulse willfully
5 infringed. Halo argues that many of Pulse's defenses were disposed of on summary
6 judgment or have been abandoned, and that the defenses Pulse relied on at trial were
7 unreasonable. Therefore, Halo concludes that Pulse acted despite an objectively high risk
8 that it was infringing, and thus acted willfully. Pulse responds that because there were
9 triable issues as to both invalidity and infringement, Halo cannot prove willful
10 infringement. Pulse argues that it consistently relied on its reasonable defense of invalidity
11 for obviousness, which was not a sham defense.

12 To prove willfulness, the patentee must prove by clear and convincing evidence both
13 an objective and subjective element of willfulness. Bard Peripheral Vascular, Inc. v. W.L.
14 Gore & Assoc., Inc., 682 F.3d 1003, 1005 (Fed. Cir. 2012). The first prong is objective
15 recklessness, which is a threshold inquiry decided by the Court as a question of law. Id. at
16 1007-08. To prove objective recklessness, the patentee must show "by clear and
17 convincing evidence that the infringer acted despite an objectively high likelihood that its
18 actions constituted infringement of a valid patent." Id. at 1005. The determination of
19 objective recklessness "entails an objective assessment of potential defenses based on the
20 risk presented by the patent." Id. at 1006. Thus, the objective recklessness prong "tends
21 not to be met where an accused infringer relies on a reasonable defense to a charge of
22 infringement." Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc., 620 F.3d
23 1305, 1319 (Fed. Cir. 2010); Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1310
24 (Fed. Cir. 2011) (noting if an accused infringer's position "is susceptible to a reasonable
25 conclusion of no infringement," then the objective prong of willfulness is not met).
26 Whether a defense is reasonable is a legal issue for the Court, even when the jury decides

1 the underlying factual questions, such as for obviousness.³ Bard, 682 F.3d at 1007.

2 If the Court determines the asserted patent defenses were not reasonable, and therefore
3 there was an objectively high risk of infringement, the Court reviews a jury's subjective
4 willfulness finding for substantial evidence. Power Integrations, Inc. v. Fairchild
5 Semiconductor Int'l, Inc., 711 F.3d 1348, 1357 (Fed. Cir. 2013). The patentee must
6 demonstrate that "this objectively-defined risk . . . was either known or so obvious that it
7 should have been known to the accused infringer." Bard, 682 F.3d at 1006 (quotation
8 omitted). However, if there is no objectively high risk of infringement, there can be no
9 willful infringement, even if the jury found the subjective prong was met. Spine Solutions,
10 620 F.3d at 1319.

11 Here, Halo has not proven by clear and convincing evidence that Pulse acted despite
12 an objectively high risk of infringement. Halo argues the evidence at trial demonstrates that
13 Pulse acted objectively recklessly, citing the Court's grant of summary judgment in favor of
14 Halo finding the H0022 group of Pulse's accused parts infringed claim 1 of the '720 patent,
15 Pulse's infringement expert's testimony that he was not offering non-infringement defenses
16 for certain product groups and claims, and a Pulse representative's concession that if the
17 patents were found valid then Pulse would be infringing certain claims. (Order (Doc. #300)
18 at 51; Jury Trial Tr. - Day 7 (Doc. #466) at 204-05; Jury Trial Tr. - Day 8 (Doc. #467) at
19 16.) Halo further argues the fact that some of Pulse's defenses were disposed of on
20 summary judgment, such as Pulse's invalidity defense under the "on-sale" bar of 35 U.S.C.
21 § 102(b), is strong evidence of objective recklessness. (Order (Doc. #300) at 25-30.)

22 However, even though Pulse conceded infringement of some claims and some of
23

24 ³ Halo argues that Pulse failed to file a Rule 50(a) Motion on the subjective element of
25 willfulness and therefore the Court must resolve all factual issues on willfulness in favor of Halo.
26 However, the Court determines the reasonableness of the defenses in light of all of the evidence, and
is not bound by the factual findings of the jury for the objective determination of willfulness. Bard,
682 F.3d at 1007-08.

1 Pulse's defenses failed at summary judgment, Pulse also asserted and consistently relied on
2 defenses that ultimately were presented at trial, including its defense of invalidity for
3 obviousness. (Jury Verdict at 9-10.) Although the jury ultimately rejected all of Pulse's
4 defenses, Pulse reasonably relied on at least its obviousness defense. (Id.) Pulse's evidence
5 on obviousness consisted of its infringement expert's testimony that the prior art disclosed
6 each element of the asserted patent claims, that it would have been obvious and predictable
7 to combine and modify the prior art references to create the asserted patent claims, and that
8 there were differences between the prior art before the PTO and the prior art Pulse
9 introduced at trial. Pulse also presented evidence of the secondary considerations of
10 obviousness, such as that the commercial success of the patented design was tied to
11 litigation-driven licenses, that there was only a single instance of skepticism by one of
12 Halo's potential customers, and that Pulse already had solved the problem of cracking due
13 to exposure to high heat years before the Halo invention.

14 Pulse did not prove obviousness by clear and convincing evidence, but presented
15 enough evidence of obviousness such that this defense was not objectively baseless, or a
16 "sham." See Bard, 682 F.3d at 1007 (stating that a suit is a sham if it was "objectively
17 baseless in the sense that no reasonable litigant could realistically expect success on the
18 merits"). Pulse reasonably relied on its obviousness defense, and it did not act in the face of
19 an objectively high likelihood that Pulse was infringing. See Spine Solutions, 620 F.3d at
20 1319 (finding, despite the jury's implicit finding that one of skill in the art would not have
21 found the combination obvious based on the prior art, that the infringer raised a substantial
22 question as to obviousness and therefore was not objectively reckless in relying on that
23 ultimately unsuccessful defense).

24 Halo argues Pulse's actions demonstrate objective recklessness. Halo submits that
25 Pulse learned of Halo's patents as early as 1998, but did nothing to determine whether Pulse
26 was infringing the patents. Halo further contends that after receiving Halo's letters in 2002,

1 Pulse did not make a conscious decision that it was permissible for Pulse to continue selling
2 the accused products. Halo argues that although a Pulse engineer conducted a “cursory”
3 invalidity analysis and determined the patents were invalid, there was no evidence that a
4 decision maker at Pulse relied on that engineer’s analysis to make a decision to continue
5 selling the accused products. This evidence, however, does not undermine Pulse’s
6 reasonable obviousness defense, and are facts relevant to the subjective element of
7 infringement.

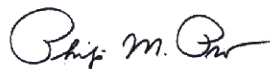
8 Halo has not proven by clear and convincing evidence that Pulse acted despite an
9 objectively high likelihood that its actions constituted infringement of a valid patent.
10 Therefore, the Court finds in favor of Pulse on willfulness, and concludes that Pulse did not
11 willfully infringe Halo’s asserted patent claims.

12 VI. CONCLUSION

13 Pulse has not met its burden to prove the asserted patent claims are obvious. Pulse
14 also has not met its burden to show Halo committed inequitable conduct before the PTO,
15 that Halo should be equitably estopped from enforcing the claims, or that Halo should be
16 barred under laches from collecting damages incurred prior to the filing of this lawsuit.
17 Similarly, Halo has not met its burden to show Pulse willfully infringed the asserted patent
18 claims. The Court therefore finds that Judgment should be entered in favor of Halo and
19 against Pulse, with the exception of the issue of willfulness.

20
21 **IT IS SO ORDERED.**

22
23 DATED: May 28, 2013

24 
25 PHILIP M. PRO
26 United States District Judge